

# Land Acknowledgement



“

We would like to begin by acknowledging that the land here in Canada is the traditional territory of the First Nations, Metis, and Inuit people. Today, Canada is home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to live and work in these communities.

”



# The Livability of Toronto for Young Professionals

Living in a safe, diverse, and well-connected city

Team: Statistically Significant

Members: Aliza Aziz Lakho, Chlois Jiang, José Casas, Janhavi Agarwal



# MEET OUR TEAM



Aliza is an incoming third-year student at the University of Toronto, studying Statistics, Mathematics, and Computer Sciences. She spent the summer working on Machine Learning Competitions on Kaggle and studying Data Analytics for Businesses on Coursera. She aims to work as a Data Engineer or a Data Analyst after graduation.

Chloris (Xiaoke) is a rising senior at the University of Toronto pursuing her degree in applied statistics. She is also a business analyst summer intern at CIBC, and an aspiring data scientist.

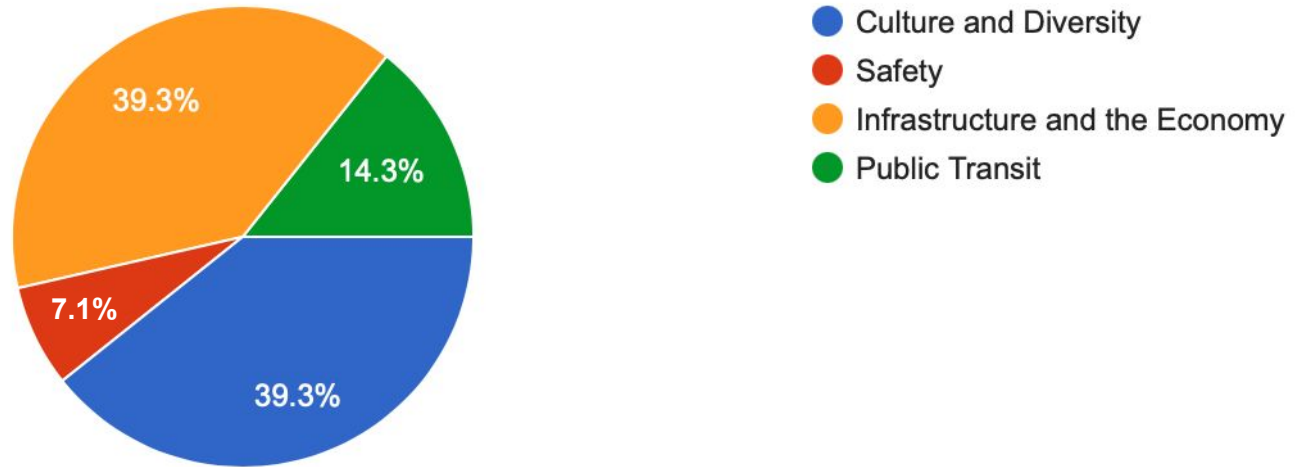


Janhavi is an incoming third-year student at the University of Toronto, majoring in Economics with a focus in Data Analytics. She spent her summer working at Wipro Limited and aims to work as a Data Analyst or Data Journalist on graduation.

José is an incoming fourth-year student at the University of Toronto, with a major in Statistics and a minor in Computer Science. He is working as a research assistant at the university.



**We surveyed 28 young professionals in Toronto on what they prioritized the most when deciding whether to move to Toronto. Here is what we found:**

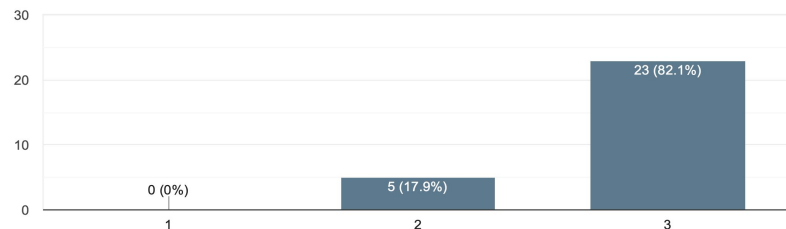


# Livability Scoring Model

In our survey, we had the participants rank Culture and Diversity, Safety, Infrastructure and the Economy, and Public Transit in Toronto from 1 (being the lowest) to 3 (being the highest). The following were the results:

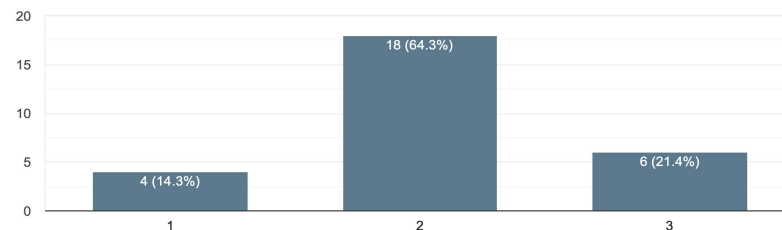
How would you rank the Culture and Diversity in Toronto (1 being the lowest, 3 being the highest)

28 responses



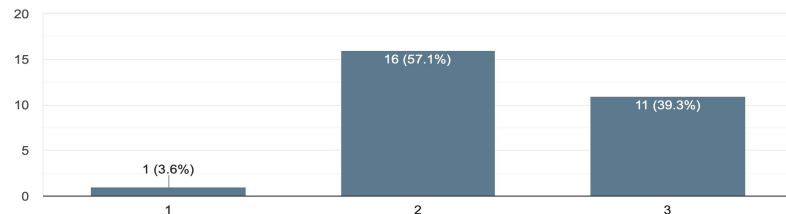
How would you rank the Safety in Toronto (1 being the lowest, 3 being the highest)

28 responses



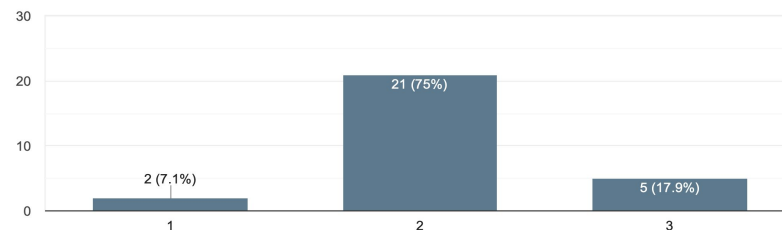
How would you rank the Infrastructure and the Economy in Toronto (1 being the lowest, 3 being the highest)

28 responses



How would you rank the Public Transit in Toronto (1 being the lowest, 3 being the highest)

28 responses



In conclusion the participants classified Toronto as a diverse city and ranked Safety, Infrastructure and Economy, and Public Transit in the city as average.

# Meet Liza...

Liza is a persona created based on our survey individuals.



## **Job Title**

Data Analyst

## **Age**

18 to 24 years

## **Highest Level of Education**

Bachelor's degree in Statistics

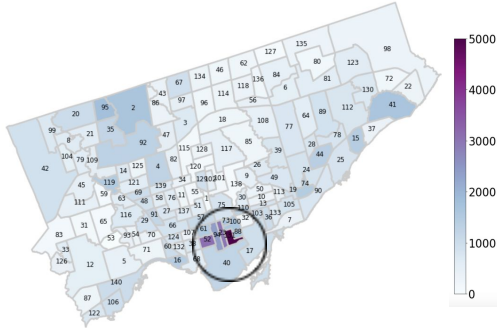
## **What is Liza looking for in a city?**

- **Affordable housing**
- **Safe neighborhood**
- **Cultural diversity, welcoming of different cultures**
- **Accessible and well-connected city**
- **Employment opportunities**

# SAFETY

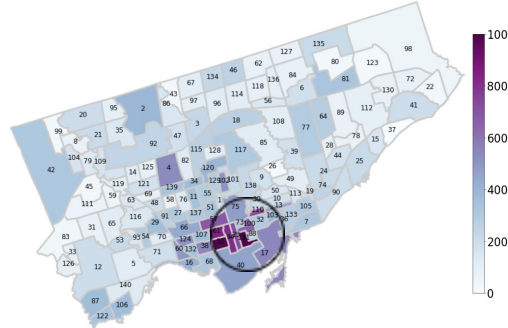
## Neighbourhoods to **avoid** based on different crimes % in 2020

Assault Rate Toronto 2020

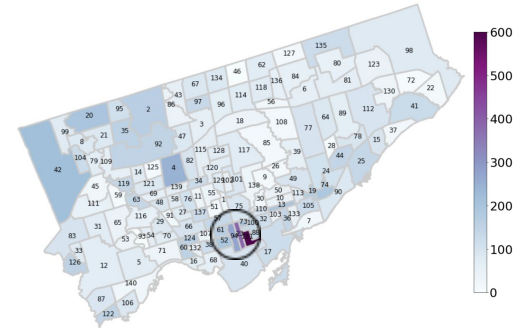


Old Toronto  
region  
(Midtown &  
Downtown)

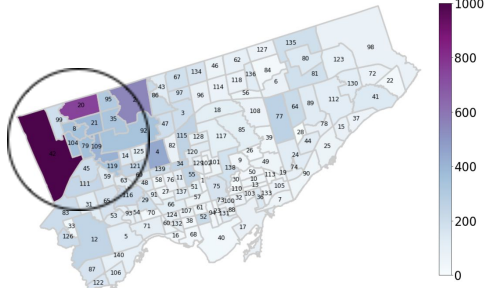
Break And Enter Rate Toronto 2020



Robbery Rate Toronto 2020

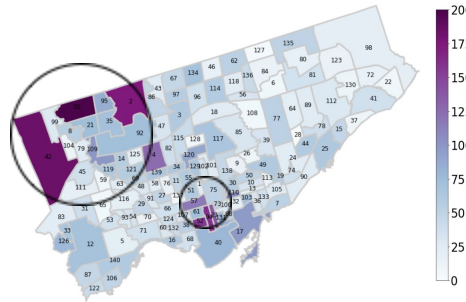


AutoTheft Rate Toronto 2020

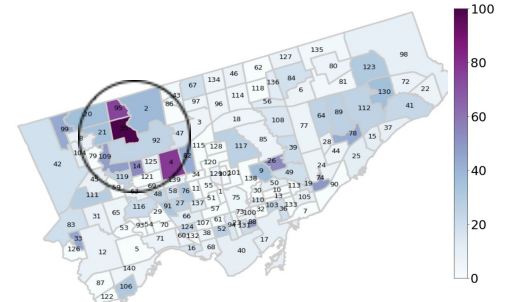


Northern  
Etobicoke &  
North York

Theft Over Toronto 2020



Shooting Rate Toronto 2020

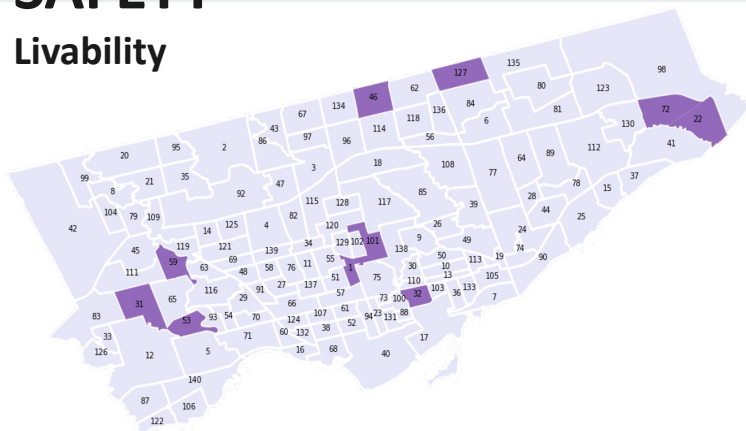


\* Crime rate are standardized to # crime per 100,000 inhabitants



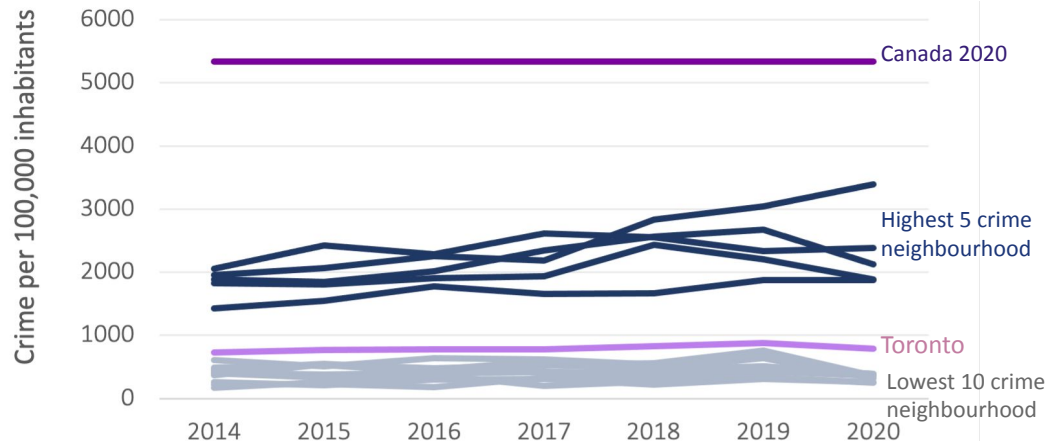
# SAFETY

## Livability



Top 10 Safest/Livable Neighbourhoods 2020

ID	Neighbourhoods	Crime rate 2020
1	Yonge-St.Clair	248.52662
127	Steeles	263.832653
53	Kingsway South	319.55066
101	Mount Pleasant East	356.10944
46	Bayview Woods-Steeles	356.63334
32	North Riverdale	365.51453
72	Highland Creek	365.77492
59	Humber Heights-Westmount	381.33879
22	Centennial Scarborough	388.495143
31	Princess-Rosethorn	390.52964



- Toronto has much lower crime % than Canada and is comparably a livable city in the sense of safety.
- Low fluctuation in low crime rate neighborhoods YoY, and seen reduced crime rate in 2020.
- Opposingly, High fluctuation in high crime rate neighborhoods YoY, some seen rise in crime rate in 2020.

\* Crime rate are standardized to # crime per 100,000 inhabitants



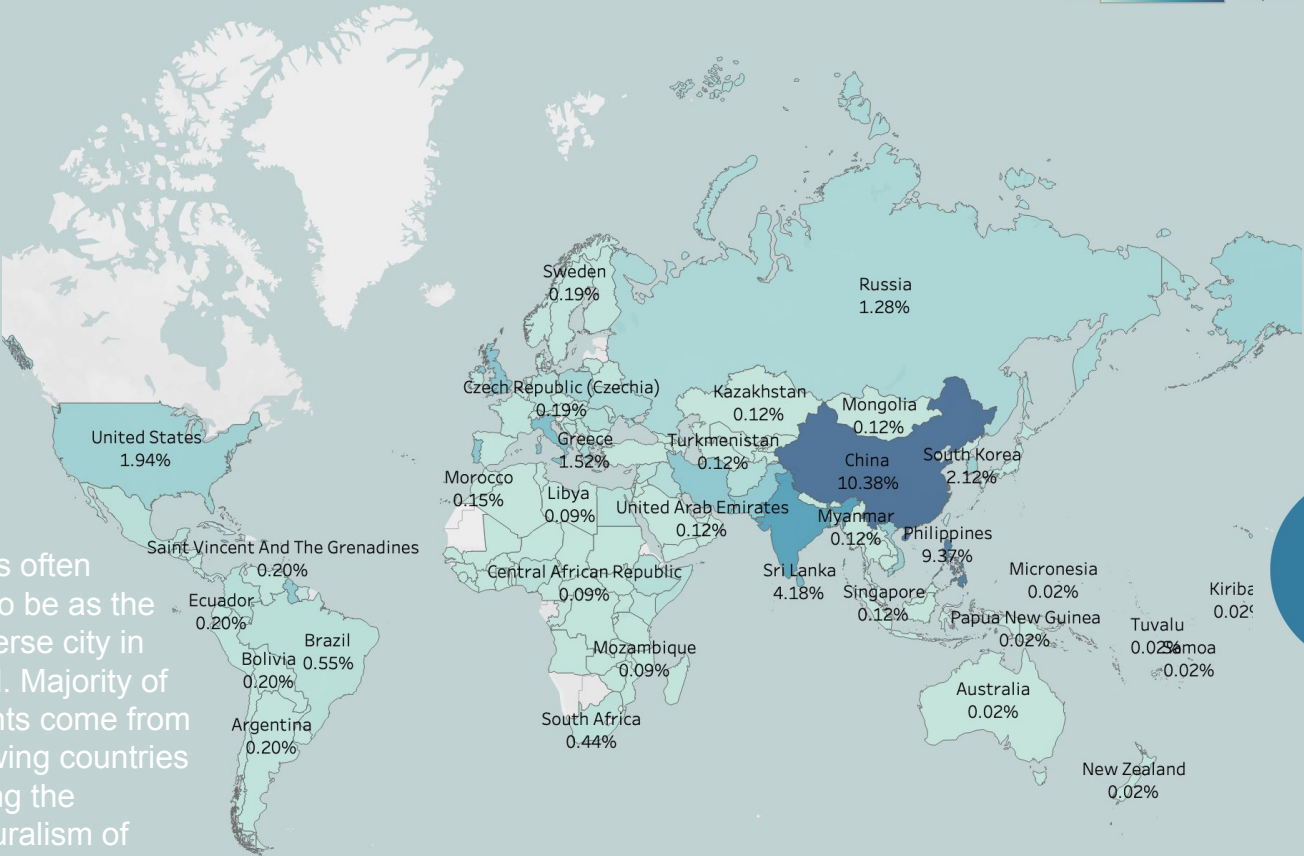
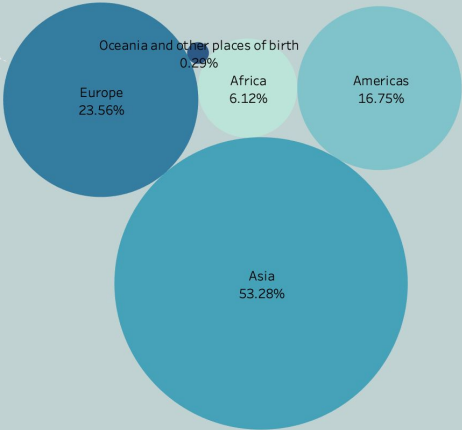
# Culture and Diversity

How diverse is Toronto? We investigate the different cultures in Toronto

270 131,480

Toronto is often thought to be as the most diverse city in the world. Majority of Immigrants come from the following countries witnessing the multiculturalism of Toronto.

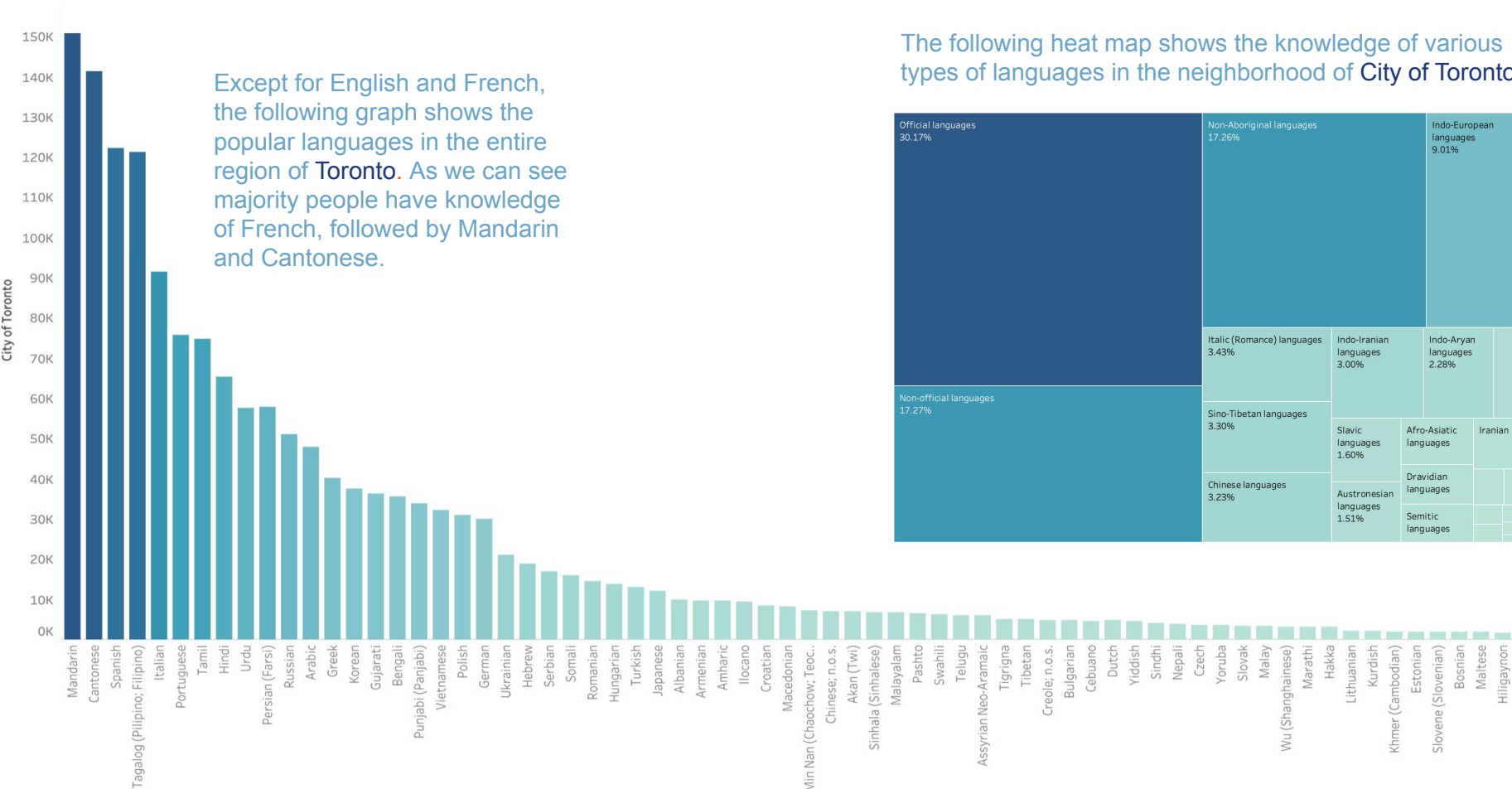
Majority of the people in Toronto have immigrated from Asia (about 53.28% which shows that about half of the diverse population comes from Asia alone!), followed by Europe, Americas, Africa and then Oceania.



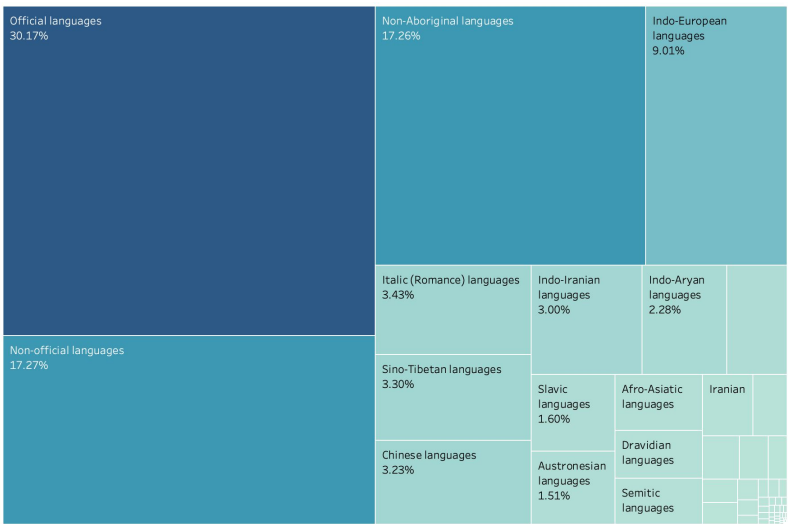
# Culture and Diversity

We investigate the most popular languages spoken in Toronto

Except for English and French, the following graph shows the popular languages in the entire region of Toronto. As we can see majority people have knowledge of French, followed by Mandarin and Cantonese.

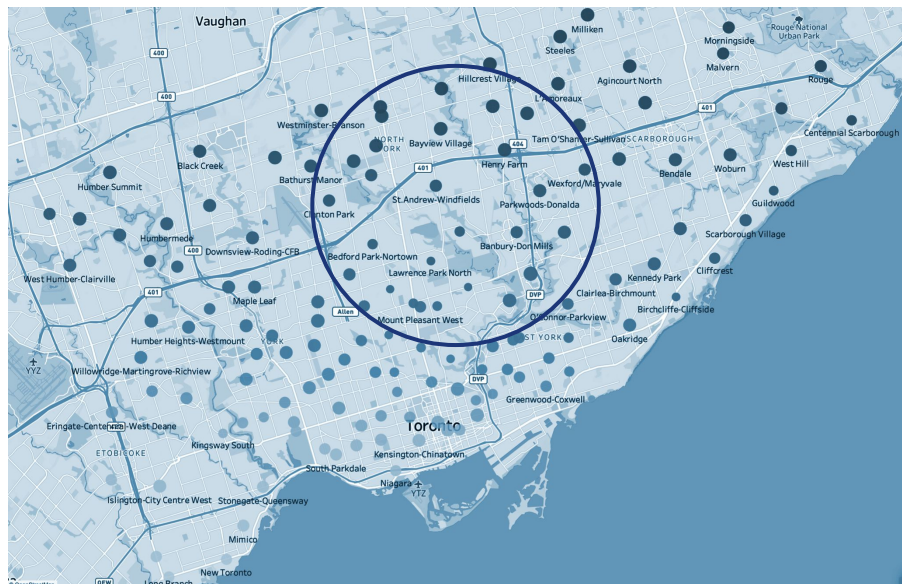


The following heat map shows the knowledge of various types of languages in the neighborhood of City of Toronto.

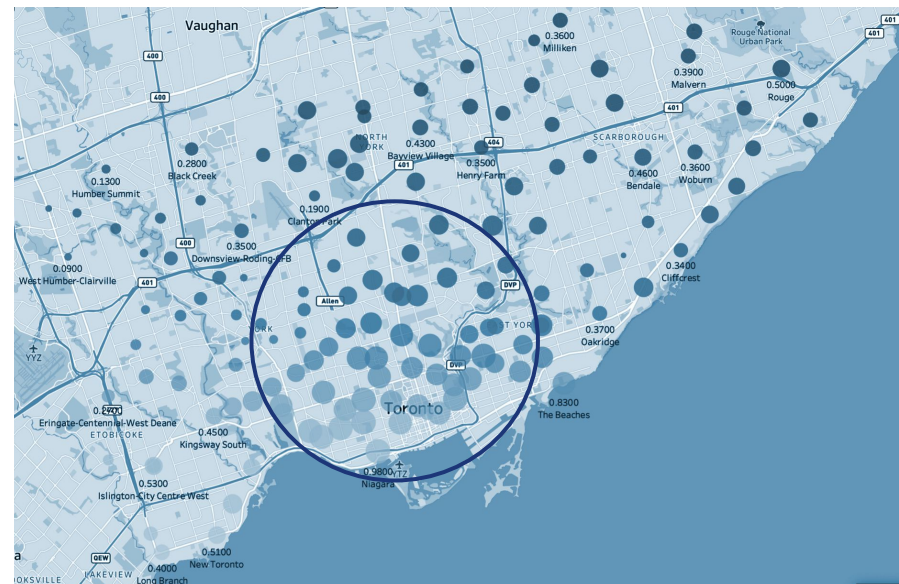


# Culture and Diversity

The following Map shows the Cultural Index of different regions within Toronto. The greater the size, the higher the Cultural Index.



The following Map shows the Linguistic Index of different regions within Toronto. The greater the size, the higher the Linguistic Index.





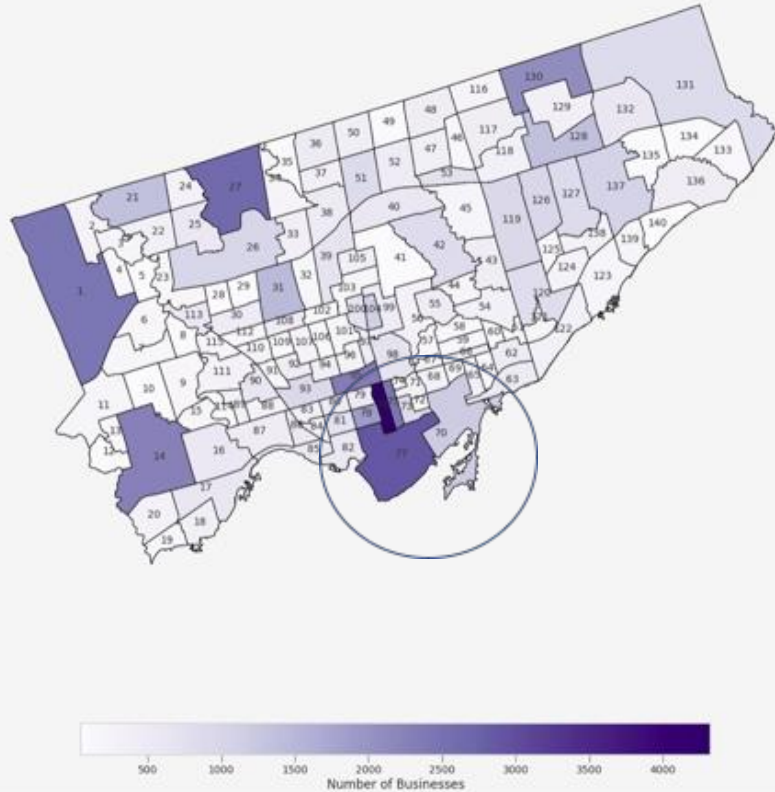
## ECONOMIC INDICATORS

On surveying 28 young professionals in Toronto, we found that 39.3% of them considered Toronto's economy to be the most important factor when deciding to make a move. In addition, on a scale from 1 to 3, we found that 64% of our surveyees ranked Toronto's economy at 2.

We then constructed maps to analyze which Toronto neighbourhoods would provide the best employment opportunities based on the following factors:

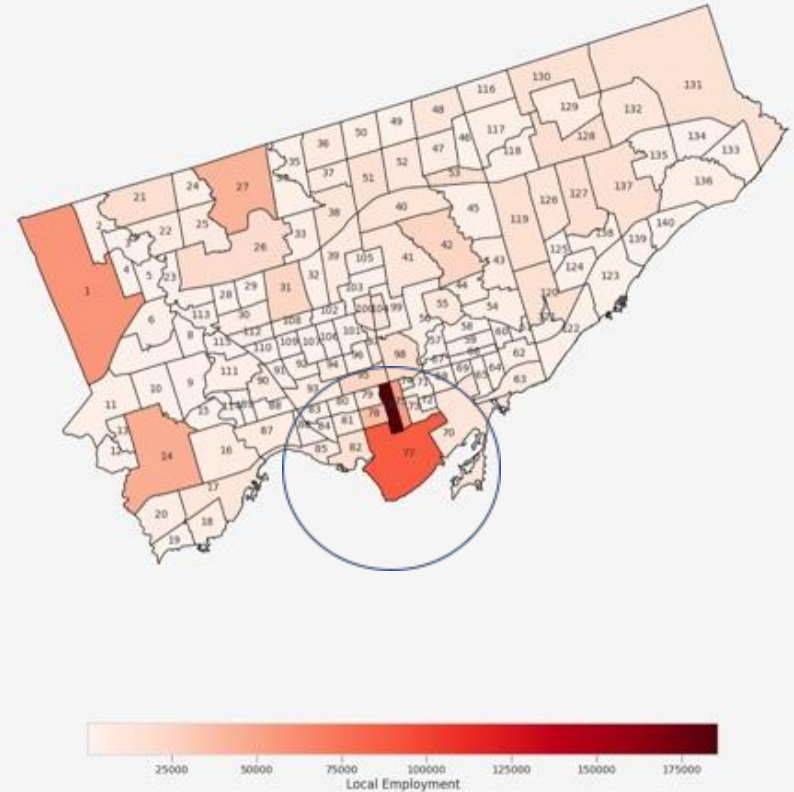
- Local employment by neighbourhood
- Number of businesses in the neighbourhood
- Average house price in the neighbourhood

Number of Businesses Across Toronto Neighbourhoods



Areas in the Downtown Core have the maximum number of businesses

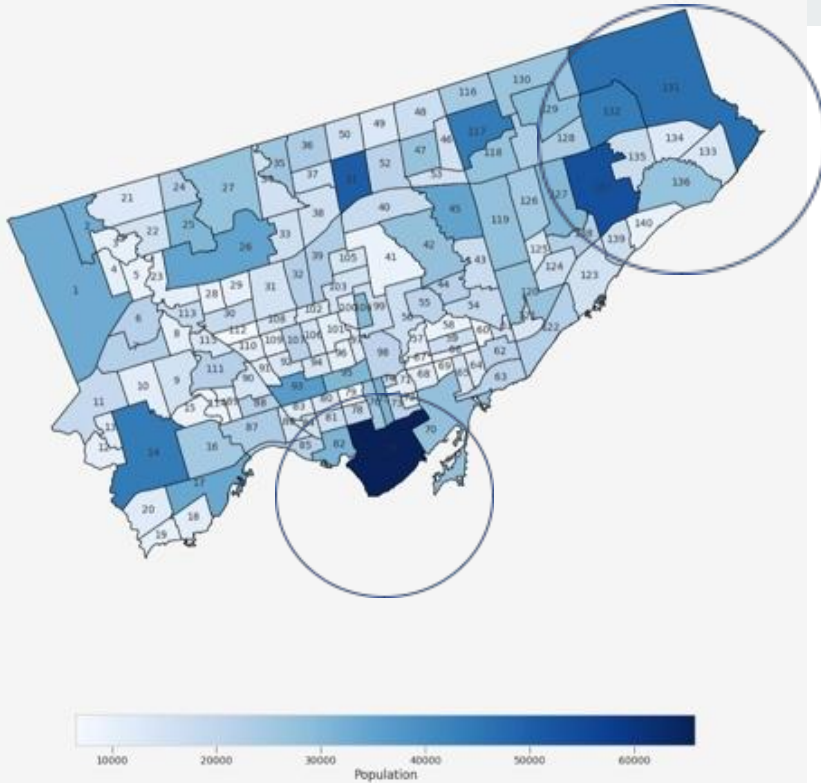
Distribution of Employment in Toronto Neighbourhoods



Maximum employment can be found in the Bay Street Corridor.

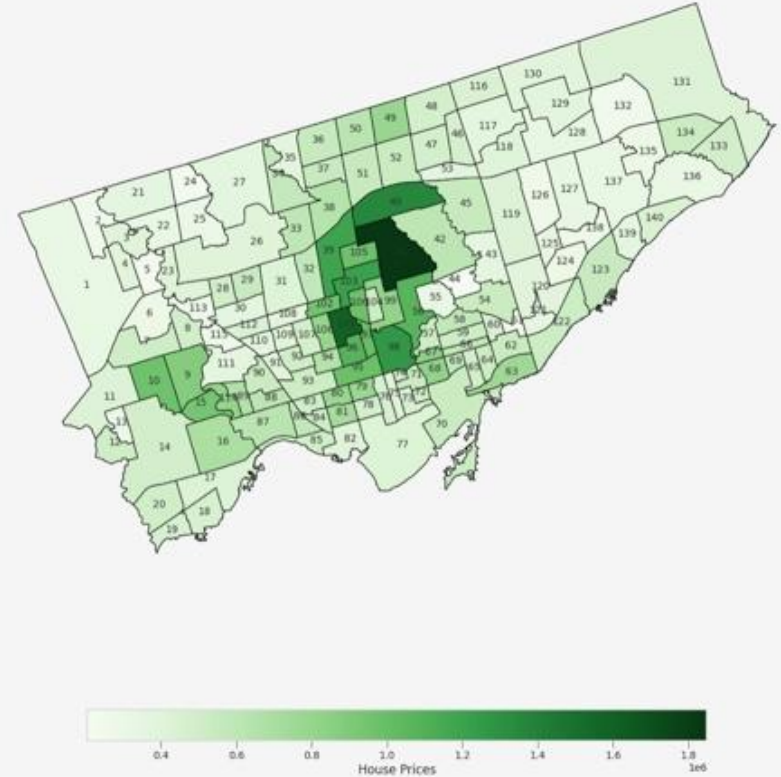


Distribution of Population Across Toronto Neighbourhoods



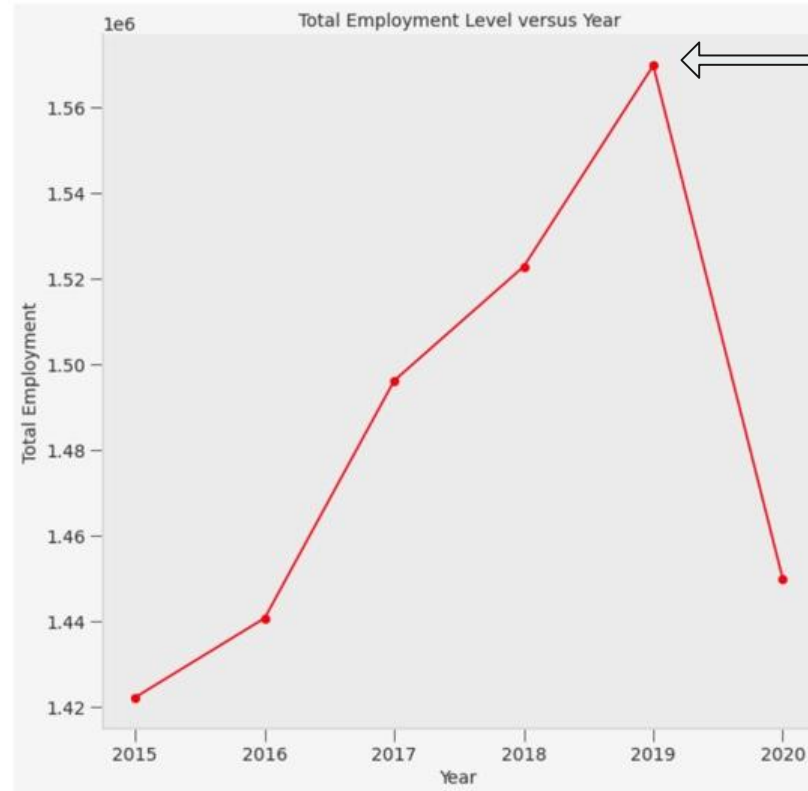
We see the highest population in the Downtown Core, and quite a bit in Scarborough as well

Distribution of Housing Prices Across Toronto Neighbourhoods



The most expensive housing was concentrated in the Old Toronto region, while more affordable housing options can be found in Scarborough, Rexdale etc

# Employment Trends in Toronto



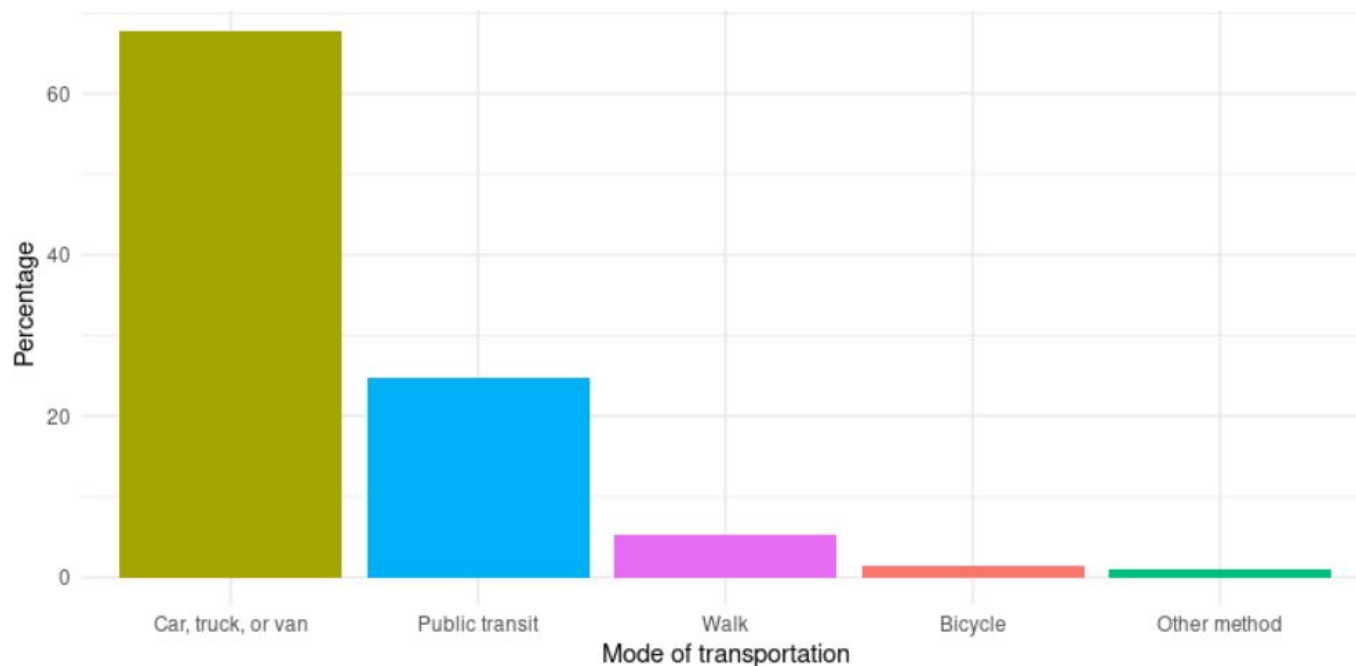
← COVID-19 Pandemic begins



# Public Transit

## Percentage distribution of workers by main mode of commuting

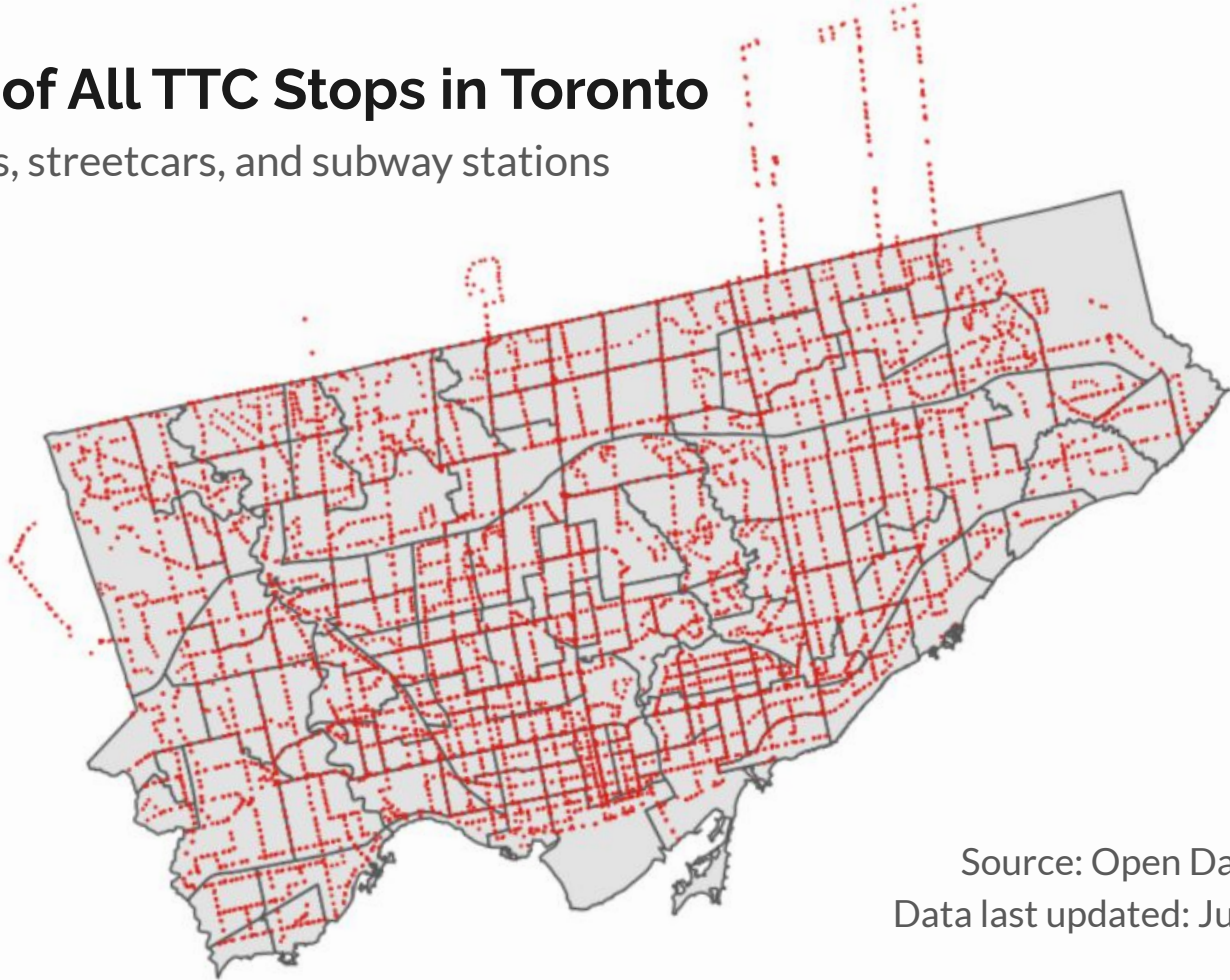
Includes all individuals aged 15 and over working at a usual place of work.



Source: Statistics Canada, Census of Population, 2016.

# Locations of All TTC Stops in Toronto

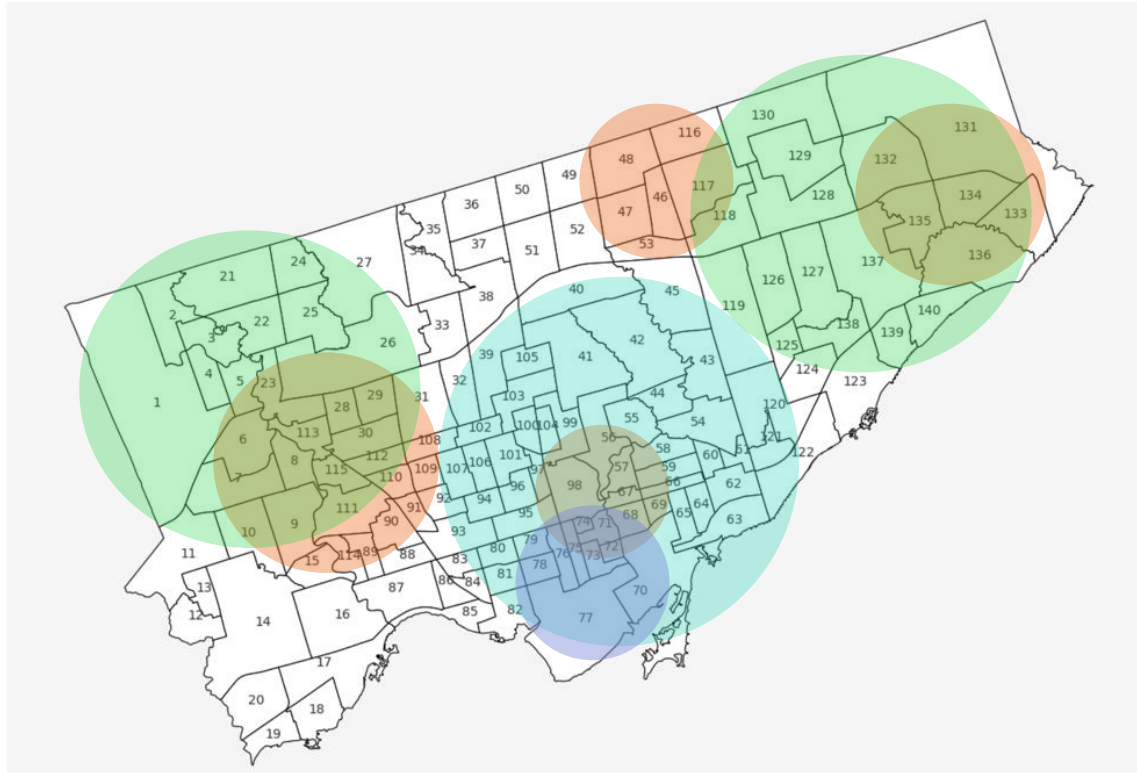
Including buses, streetcars, and subway stations



Source: Open Data Toronto  
Data last updated: June 8, 2021

# To Tie Everything Together...

Here are the Toronto neighbourhoods we found would suit Lisa's various needs.



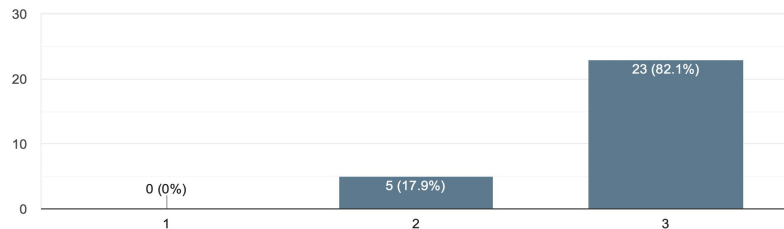
- Safest
- Most diverse
- Maximum Employment
- Cheapest Housing

# Livability Scoring Model

Next, we can proceed to giving Toronto a score based on the Diversity, Safety, Public Transit, and Infrastructure and Economy in Toronto.

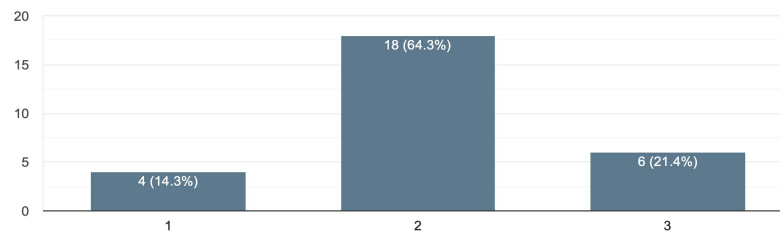
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28 responses



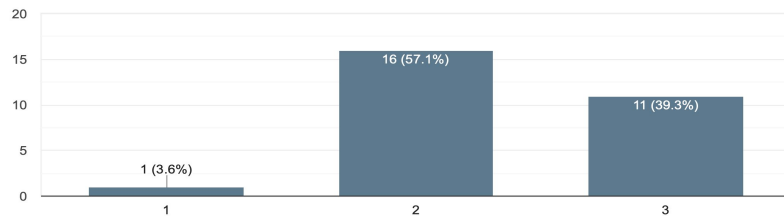
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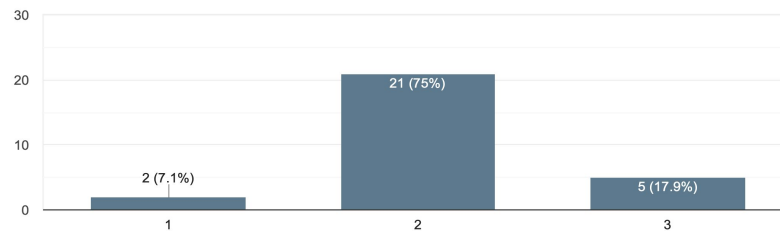
How would you rank the Infrastructure and the Economy in Toronto (1 being the lowest, 3 being the highest)

28 responses



How would you rank the Public Transit in Toronto (1 being the lowest, 3 being the highest)

28 responses



# Livability Scoring Model



We would give Toronto the following ranks:

- Culture and Diversity: 0.94
- Safety: 0.69
- Infrastructure and Economy: 0.79
- Public Transit: 0.70

And the overall livability score of Toronto becomes:





## Conclusion

Toronto is a great city for young professionals.

With an abundance of employment opportunities available in the Downtown Core, Liza can find affordable housing options in regions with low crime rates and high diversity such as East York, Scarborough and Etobicoke, and leverage Toronto's well connected transit system to commute to these places for work.



# Limitations

- Lack of 2021 data
- Sample size: The sample size in our survey design is small, and a larger sample size will be more representative to our groups of interest
- Time constraint





# Bibliography

All of the data used in this presentation was obtained from the Open Data Toronto Portal and Statistics Canada